

Foundations

1. No footing shall be poured on loose or unsuitable soils, in water or on frozen ground.
2. All exterior footings to conform to all applicable code requirements for frost protection.
3. All concrete shall have a minimum compressive strength of at least 3000 PSI at 28 days.
4. Foundation anchorage to comply with IRC 2015 Section R403.1.6, it shall consist of minimum size 1/2" diameter anchor bolts with 3/16" x 2" x 2" washers at a maximum of 7'2" oc for two stories or 48" oc for more than two stories, max of 12" from each corner, min of 2 bolts per wall. Anchor bolt shall extend 7" into concrete or grouted cells of concrete masonry units. Be aware that a garage under may be counted by your code officer as a story. Additional anchorage may be required at braced walls.
5. Foundation reinforcing steel is to be installed in accordance with all applicable provisions of IRC 2015 Section 404.1.3.2

TYPICAL PERIMETER FOUNDATION WALL:

- 8" poured concrete, 8 ft forms, min 7'-10" finished, with total of 3 rebar, as follows:
 - (1) #4 rebar, 4" from top
 - (1) #4 rebar @ vertical midpoint. Omit this rebar at walls 4 ft high or less.
 - (1) #4 rebar, min 3" from bottom or per code
 - Lap corners & splices of rebar per code.
 - Secure sill to foundation with 1/2" diameter anchor bolts that extend 7" into concrete and tightened with a nut and washer @ 6' oc & max 12" from each corner & each end @ wood sill splices - If built-up sill, bolts must extend through all sill plates or straps must secure all sill plates.

TYPICAL PERIMETER FOOTING:

1. Use Footing chart(s) below to verify that depth of home matches chart. Depth is foundation dimension eave to eave. Contact Artform Home Plans if you believe the chart does not match the plan.
 2. Select row for snow load shown on the structural plans.
 3. Select a column for soil bearing pressure based on soil type and/or consultation with code officer.
 4. The required footing size is at the intersection of the Snow Load and Soil PSF. Rebar is not required. Key or pin foundation wall to footing per code.
- FAQ: Adding rebar to footings does not reduce the required width. Rebar affects performance with earth movement, like an earthquake and has near zero effect on bearing capacity.

Guide to Soil PSF

3,000	Sandy gravel and/or gravel (GW and GP)
2,000	Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM and GC)
1,500	Clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL, ML, MH and CH)

8" wall - Footing Size for 28 ft wide house			
Snow Load	Story and type of structure	Load Bearing Value of Soil (PSF)	
		1500 PSF	2000 PSF
50 PSF	2 Story - Plus Basement	23 x 7.5	17 x 6
55 PSF	2 Story - Plus Basement	23.5 x 7.75	17.25 x 6
60 PSF	2 Story - Plus Basement	24 x 8	17.5 x 6
65 PSF	2 Story - Plus Basement	24.5 x 8.25	17.75 x 6
70 PSF	2 Story - Plus Basement	25 x 8.5	18 x 6

8" wall - Footing Size for 32 ft wide house			
Snow Load	Story and type of structure	Load Bearing Value of Soil (PSF)	
		1500 PSF	2000 PSF
50 PSF	2 Story - Plus Basement	25 x 8.5	19 x 6
55 PSF	2 Story - Plus Basement	25.5 x 8.75	19.25 x 6
60 PSF	2 Story - Plus Basement	26 x 9	19.5 x 6
65 PSF	2 Story - Plus Basement	26.5 x 9.25	19.75 x 6
70 PSF	2 Story - Plus Basement	27 x 9.5	20 x 6

8" wall - Footing Size for 36 ft wide house			
Snow Load	Story and type of structure	Load Bearing Value of Soil (PSF)	
		1500 PSF	2000 PSF
50 PSF	2 Story - Plus Basement	27 x 9.5	21 x 7
55 PSF	2 Story - Plus Basement	27.5 x 9.75	21.25 x 7
60 PSF	2 Story - Plus Basement	28 x 10	21.5 x 7
65 PSF	2 Story - Plus Basement	28.5 x 10.25	21.75 x 7
70 PSF	2 Story - Plus Basement	29 x 10.5	22 x 7

Foundation Contractor Check List

Confirm or review the following prior to forming & pouring foundation

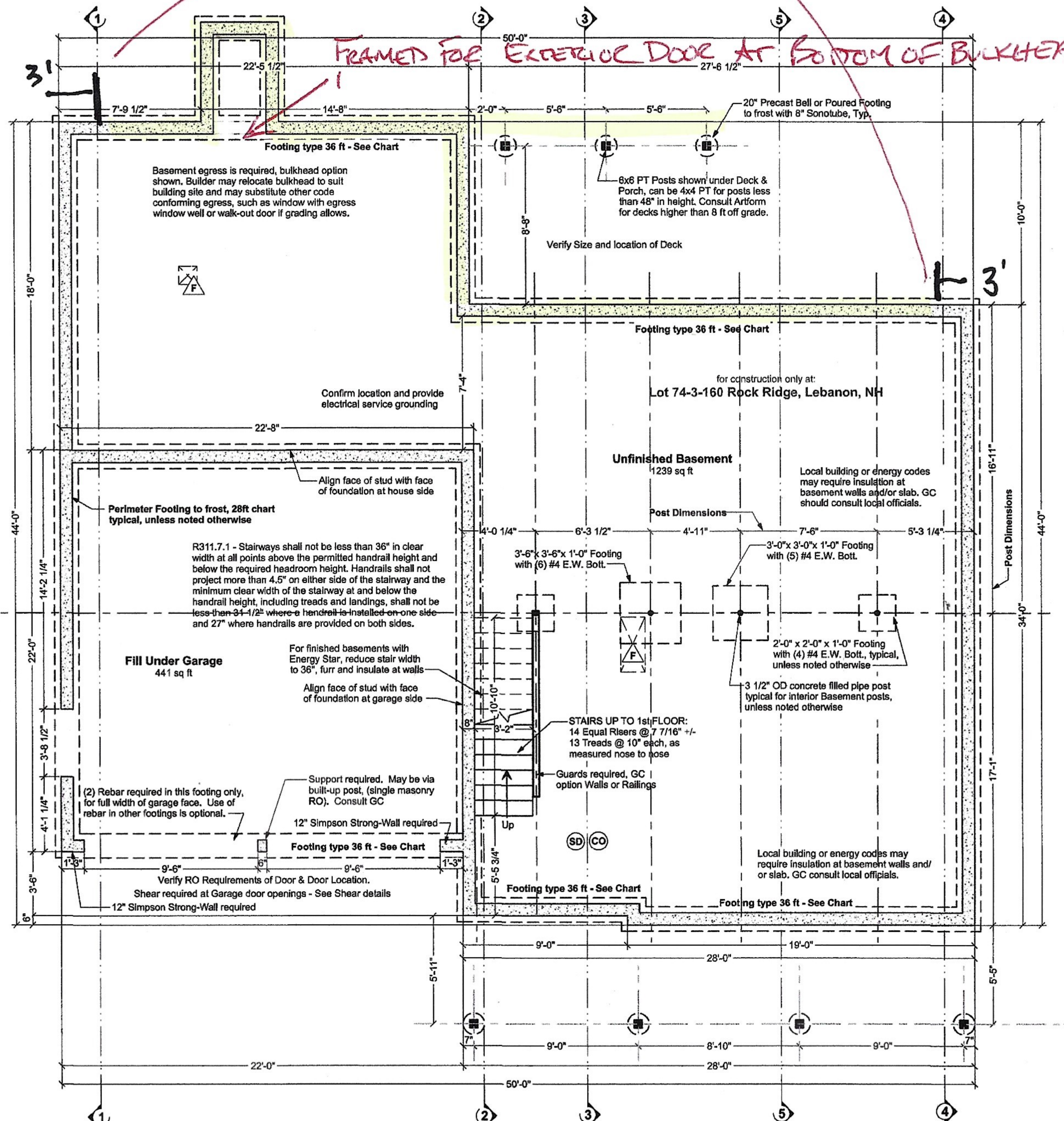
Initials Date Checked

- Confirmed soil bearing
- Checked w/GC for added foundation steps to suit grade
- Confirm sill plate thickness (foundation bolts to extend through all)
- Confirmed garage door size
- Checked w/GC for added basement windows
- Checked w/GC for added basement man doors
- Confirmed sizes & locations mech/plbg penetrations
- Confirmed sizes and locations of beams w/GC, added or adjusted beam pockets
- Confirmed location and installed electrical service grounding - See GC for location

MINIMUM VERTICAL REINFORCEMENT FOR 8-INCH (203MM) NOMINAL FLAT CONCRETE BASEMENT WALL

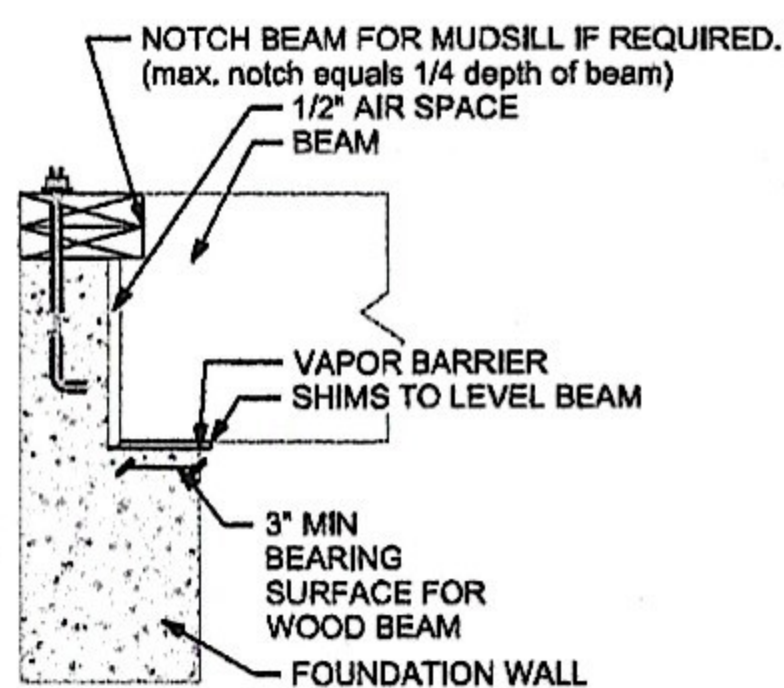
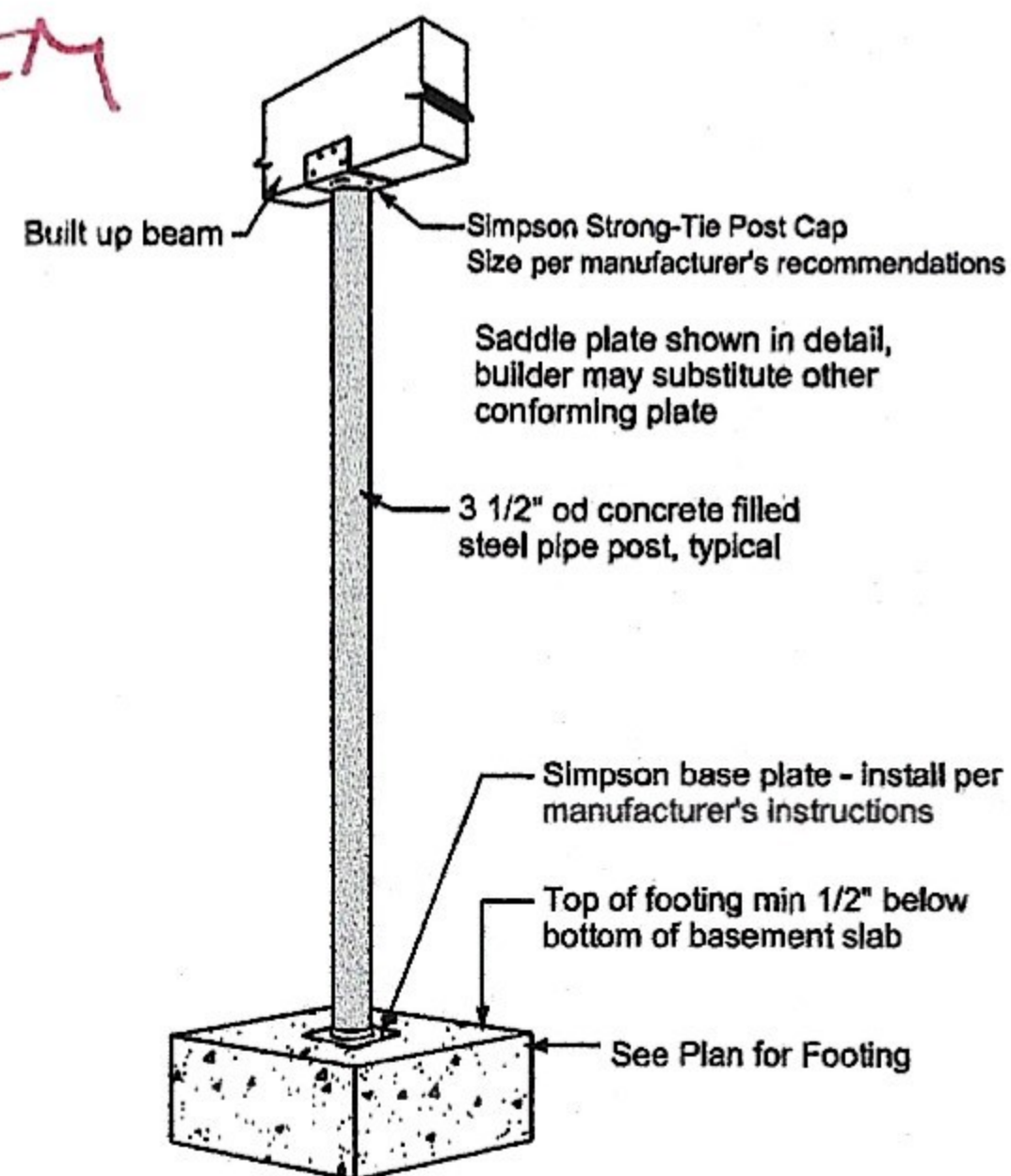
MAXIMUM UNSUPPORTED WALL HEIGHT (feet)	MAXIMUM UNBALANCED BACKFILL HEIGHT (feet)	MINIMUM VERTICAL REINFORCEMENT - BAR SIZE AND SPACING (inches)			
		Soil classes and design lateral soil (psf per foot of depth)			
		GW, GP, SW, SP	GM, GC, SM, SM-SC and ML	SC, ML-CL and Inorganic CL	
8	4	NR	NR	NR	
	5	NR	NR	NR	
	6	NR	NR	8 @ 37	
	7	NR	8 @ 36	8 @ 34	
	8	8 @ 41	8 @ 35	8 @ 28	

4' CONCRETE FOUNDATION WALL w/ WOOD FRAMING TO 1ST FL FLOORING SYSTEM



Foundation Plan

Structure designed for
Snow Load of 80 psf
Ceiling Height may vary: 8ft Forms



Beam Pocket

Scale 1/2"=1'-0"

Your use of these drawings constitutes an acceptance of responsibility as outlined in "Dear Code Officer" on the first page of these drawings, and on our web site: <http://www.artformhomeplans.com/TermsConditions.pdf>

If you have any concerns or questions, please feel free to contact us. We are happy to clarify matters that fall within our scope, as listed on the first page. We can also often provide affordable support for issues that are your responsibility, such as energy design/calcs, or additional detailing.

Artform Home Plans

Artform Design # 583.126.v9 OL
© 2015-2020 Artform Architecture 603.431.9559
Merry Sapphire Premier, 28x34
Lot 74-3-160 Rock Ridge
Lebanon, NH

1/4"=1'-0" unless noted otherwise / Print @ T11
PDF created on: 12/10/2020, drawn by ACJ

3

Revised for Construction

R1: 2.10.20 - Update orientation